STATUS OF THE CLAIMS

1. (Previously presented) A formulation for a therapeutic or a cosmetic treatment, which formulation comprises:

at least one anti-sense polynucleotide to a connexin protein together with a pharmaceutically acceptable carrier or vehicle.

- 2. (Original) A formulation according to claim 1, suitable for topical administration.
- 3. (Previously presented) A formulation according to claim 1, wherein the polynucleotide is an oligodeoxynucleotide.
- 4. (Previously presented) A formulation according to claim 1 which contains polynucleotides to one connexin protein only.
- 5. (Original) A formulation according to claim 4 wherein said connexin protein is connexin 43, connexin 26, connexin 31.1, connexin 32 or connexin 36.
- 6. (Previously presented) A formulation according to claim 1which contains polynucleotides to more than one connexin protein.
- 7. (Original) A formulation according to claim 6 in which one of the connexin proteins to which polynucleotides are directed is connexin 43.
- 8. (Original) A formulation according to claim 6 which includes polynucleotides directed to at least two of connexin 26, connexin 31.1, connexin 32, connexin 36 and connexin 43.
- 9. (Currently Amended) A formulation according to claim 5 in which the polynucleotide to connexin 43 is selected from the group consisting of:

GTA ATT GCG GCA AGA AGA ATT GTT TCT GTC (SEQ ID NO:1);

GTA ATT GCG GCA GGA GGA ATT GTT TCT GTC (SEQ ID NO:2); and

GGC AAG AGA CAC CAA AGA CAC TAC CAG CAT (SEO ID NO:3).

10. (Currently Amended) A formulation according to claim 5 in which the polynucleotide to connexin 26 is:

TCC TGA GCA ATA CCT AAC GAA CAA ATA (SEQ ID NO:4).

11. (Currently Amended) A formulation according to claim 8 in which the polynucleotide to connexin 31.1 is:

CGT CCG AGC CCA GAA AGA TGA GGT C (SEQ ID NO: 5).

12. (Currently Amended) A formulation according to claim 5 in which the polynucleotide to connexin 32 is:

TTT CTT TTC TAT GTG CTG TTG GTG A (SEQ ID NO:6).

- 13. (Previously Presented) A formulation according to claim 1 in which the pharmaceutically acceptable carrier or vehicle is, or includes, a gel.
- 14. (Original) A formulation according to claim 13 in which the gel is a nonionic polyoxycthylene-polyoxypropylene copolymer gel.
- 15. (Previously Presented) A formulation according to claim 1 which further includes a surfactant or urea to assist with polynucleotide penetration into a cell.
- 16. (Previously Presented) A method of site-specific downregulation of connexin protein expression for a therapeutic or a cosmetic purpose which comprises administering a formulation as defined in claim 1 to a site on or within a patient at which said downregulation is required.
- 17. (Previously Presented) A method of reducing neuronal cell death which would otherwise result from a neuronal insult to a specific site in the brain, spinal cord or optic nerve of a patient which comprises the step of administering a formulation as defined in claim 1 to said site to downregulate expression of a connexin protein at and immediately adjacent said site.

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18. (Original) A method according to claim 17 in which the formulation is administered to reduce neuronal loss due to physical trauma to the brain, spinal cord or optic nerve.

- 19. (Previously Presented) A method according to claim 17 in which the formulation is administered in a sufficient amount to downregulate expression of said connexin protein for at least 24 hours post-administration.
- 20. (Previously Presented) A method of promoting wound healing in a patient which comprises the step of administering a formulation as defined in claim 1 to said wound to downregulate expression of a connexin protein at and immediately adjacent the site of said wound.
- 21. (Original) A method according to claim 20 in which the wound is the result of trauma.
 - 22. (Original) A method according to claim 21 in which the trauma is a burn.
- 23. (Previously Presented) A method according to claim 20 in which the wound is the result of a surgery.
- 24. (Previously Presented) A method of reducing inflammation as part of treating a wound or a tissue subjected to a physical trauma which comprises the step of administering a formulation as defined in claim 1 to, or proximate to, said wound or tissue.
- 25. (Original) A method according to claim 24 in which the formulation is administered to reduce inflammation due to physical trauma to the brain, spinal cord or optic nerve.
- 26. (Previously Presented) A method of decreasing scar formation in a patient who has suffered a wound which comprises the step of administering a formulation as defined in claim 1 to said wound to downregulate expression of a connexin protein at and immediately adjacent the site of said wound.

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27. (Previously Presented) A method of skin rejuvenation or thickening for a cosmetic or a therapeutic purpose which comprises the step of administering, once or repeatedly, a formulation as defined in claim 1 to a skin surface.

- 28. (Original) A method according to claim 27 wherein said formulation includes polynucleotide directed to connexin 43 and is administered to regulate epithelial basal cell division and growth.
- 29. (Original) A method according to claim 27 wherein said formulation includes polynucleotide directed to connexin 31.1 and is administered to regulate outer layer keratinisation.
- 30. (Previously Presented) A method according to claim 27 wherein said formulation is a cream.
- 31. (Original) The use of at least one anti-sense polynucleotide to a connexin protein in the manufacture of a medicament for downregulating expression of said connexin protein for a therapeutic or cosmetic purpose.
- 32. (Original) The use of claim 31 wherein said medicament is for reducing neuronal cell death which would otherwise result from a neuronal insult.
- 33. (Original) The use of claim 31 wherein said medicament is for promoting wound healing.
- 34. (Original) The use of claim 31 wherein said medicament is for reducing inflammation.
- 35. (Original) The use of claim 31 wherein said medicament is for decreasing scar formation.
- 36. (Original) The use of claim 31 wherein said medicament is for skin rejuvenation for a cosmetic or therapeutic purpose.

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37. (Previously Presented) A formulation according to claim 2, wherein the polynucleotide is an oligodeoxynucleotide.

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38. (Currently Amended) A formulation according to claim 7 in which the polynucleotide to connexin 43 is selected from the group consisting of:

GTA ATT GCG GCA AGA AGA ATT GTT TCT GTC (SEQ ID NO:1);

GTA ATT GCG GCA GGA GGA ATT GTT TCT GTC (SEQ ID NO:2); and

GGC AAG AGA CAC CAA AGA CAC TAC CAG CAT (SEQ ID NO:3).

39. (Currently Amended) A formulation according to claim 8 in which the polynucleotide to connexin 43 is selected from the group consisting of:

GTA ATT GCG GCA AGA AGA ATT GTT TCT GTC (SEQ ID NO:1);

GTA ATT GCG GCA GGA GGA ATT GTT TCT GTC (SEQ ID NO:2); and

GGC AAG AGA CAC CAA AGA CAC TAC CAG CAT (SEQ ID NO:3).

40. (Currently Amended) A formulation according to claim 8 in which the polynucleotide to connexin 26 is:

TCC TGA GCA ATA CCT AAC GAA CAA ATA (SEQ ID NO:4).

41. (Currently Amended) A formulation according to claim 8 in which the polynucleotide to connexin 31.1 is:

CGT CCG AGC CCA GAA AGA TGA GGT C (SEQ ID NO:5).

42. (Currently Amended) A formulation according to claim 8 in which the polynucleotide to connexin 32 is:

TTT CTT TTC TAT GTG CTG TTG GTG A (SEQ ID NO:6).

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